



# SEQUENCE LISTING

<110> Suga, Hiroaki

<120> Catalytic RNA Molecules with Aminoacylation Activity

<130> 11520.0222

<140> US 09/721,414

<141> 2000-11-22

<150> US 60/167,331

US 60/214,382

<151> 1999-11-24

2000-06-28

<160> 22

<210> 1

<211> 110

<212> DNA

<213> artificial sequence

<220>

<221> n represents a,t,g or c.

<222> 21-90

<223> synthetic oligonucleotide containing random pool of 70 nucleotides

<400> 1

ggatcgtcag tgcattgaga nnnnnnnnnn nnnnnnnnnn	40
nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn	80
nnnnnnnnnn ggtggtatcc ccaaggggta	110

<210> 2

<211> 76

<212> DNA

<213> artificial sequence

<220>

<223> completely synthesized primer complementary to the *otrRNA*<sup>Gln</sup>

<400> 2

tggctgcggt acgaggattc gaacctcgga atgccggatt	40
tagaaatccg gtcccttacc ccttggggat accacc	76

<210> 3

<211> 52

<212> DNA

<213> artificial sequence

<220>  
 <223> 5' primer containing T7 promoter sequence

<400> 3  
 ggtaacacgc atatgtaata cgactcacta taggatcgtc 40  
 agtgcattga ga 52

<210> 4  
 <211> 20  
 <212> DNA  
 <213> artificial sequence

<220>  
 <223> 3'completely synthesized primer

<400> 4  
 tggctgctggt acgaggattc 20

<210> 5  
 <211> 146  
 <212> RNA  
 <213> artificial sequence

<220>  
 <223> pre-12 catalytic RNA

<400> 5  
 ggaucgucag ugcauugaga uuuccgcagc ccuucucacu 40  
 aacggugggu caugggguauu ggcguuaggu gcgggaugcu 80  
 acgcuggugg uauccccaag gguacgggac cggacauucg 120  
 agauucgaau ccucguaccg cagcca 146

<210> 6  
 <211> 151  
 <212> RNA  
 <213> artificial sequence

<220>  
 <221> n represents a,t,g or c  
 <222> 12  
 <223> pre-38 catalytic RNA

<400> 6  
 ggaucgucag uncauugaga uuuccgcagc ccuucucacu 40  
 aacggugggu ucaugggguau uggcguuagg ugcgggaugc 80  
 uacuacgcug gugguauccc caagggguacg ggaccggauc 120  
 auucgagauu cgaauccucg uaccgcagcc a 151

<210> 7  
 <211> 150  
 <212> RNA  
 <213> artificial sequence

<220>

<223> pre-29 catalytic RNA

<400> 7

ggaucgucag	ugcauugaga	uuuccgcagg	cccuucucac	40
uaacgguggg	ucauggguau	uggcguuagg	ugcgggaugc	80
uacuacgcug	gugguaucce	caaggguaacg	ggaccggaca	120
uucgagauuc	gaauccucgu	accgcagcca		150

<210> 8

<211> 150

<212> RNA

<213> artificial sequence

<220>

<223> pre-36 catalytic RNA

<400> 8

ggaucgucag	ugcauugaga	uuuccgcagc	ccuucucacu	40
aacggugggu	cauggguauu	ggcguuaggu	gcgggaugcu	80
acuacgcugg	ugguaucce	aaggguaacg	gaccggauca	120
uucgagauuc	gaauccucgu	accgcagcca		150

<210> 9

<211> 150

<212> RNA

<213> artificial sequence

<220>

<223> pre-24 catalytic RNA

<400> 9

ggaucgucag	ugcauugaga	uuuccgcagg	cccuucucac	40
uaacgguggg	ucauggguau	uggcguuagg	ugcgggaugc	80
uacuacgcug	gugguaucce	caaggguaacg	ggaccggaca	120
uucgagauuc	gaauccucgu	accgcagcca		150

<210> 10

<211> 149

<212> RNA

<213> artificial Sequence

<220>

<223> pre-25 catalytic RNA

<400> 10

ggaucgucag	ugcauugaga	uuuccgcagc	ccuucucacu	40
aacggugggu	cauggguauu	ggcguuaggu	gcgggauacu	80
acuacgcugg	ugguaucce	aaggguaacg	gaccggacau	120
ucgagauucg	aauccucgua	ccgcagcca		149

<210> 11

<211> 149  
<212> RNA  
<213> artificial Sequence

<220>  
<223> pre-22 catalytic RNA

<400> 11  
ggaucgucag ugcauugaga uuuccgcagc ccuucucacu 40  
aacggugggu cauggguguu ggcguuaggu gcgggaugcu 80  
acuacgcugg ugguaucccc aaggguacgg gaucggacau 120  
ucgagauucg aauccucgua ccgcagcca 149

<210> 12  
<211> 149  
<212> RNA  
<213> artificial Sequence

<220>  
<221> n represents a,t,g or c  
<222> 112  
<223> pre-5 catalytic RNA

<400> 12  
ggaucgucag ugcauugaga uuuccgcagc ccucucacu 40  
aacggugggu cauggguauu ggcguuaggu gcgggaugcu 80  
acuacgcugg ugguaucccc aaggguacgg gnccggacau 120  
ucgagauucg aauccucgua ccgcagcca 149

<210> 13  
<211> 149  
<212> RNA  
<213> artificial Sequence

<220>  
<223> pre-19 catalytic RNA

<400> 13  
ggaucgucag ugcauugaga uuuccgcagc ccuucucacu 40  
aacgguaggu cauggguauu ggcguuaggu gcgggaugcu 80  
acuacgcugg ugguaucccc aaggguacgg gaccggacau 120  
ucgagauucg aauccucgua ccgcagcca 149

<210> 14  
<211> 150  
<212> RNA  
<213> artificial Sequence

<220>  
<223> pre-8 catalytic RNA

<400> 14  
 ggaucgucag ugcauugaga uuuccgcagc ccuucucacu 40  
 aacggugggg ucaugggguau uggcguuagg ugcgggaugc 80  
 uacuacgcug gugguauccu caaggguacg ggaccggaca 120  
 uucuagauuc gaauccucgu accgcagcca 150

<210> 15  
 <211> 148  
 <212> RNA  
 <213> artificial Sequence

<220>  
 <223> pre-23 catalytic RNA

<400> 15  
 ggaucgucag ugcauugaga uuuccgcagc ccuucucacu 40  
 aacggugggg caugggguau ggcguuaggu gcgggaugcu 80  
 acuacgcugg ugguauccea aggguacggg accggacauu 120  
 cgagauucga auccucguac cgcagcca 148

<210> 16  
 <211> 75  
 <212> RNA  
 <213> Escherichia coli

<220>  
 <223> otRNA

<400> 16  
 ggugguaucc ccaaggggua agggaccgga uucuaaaucc 40  
 ggcauuccga gguucgaaucc cucguaccgc agcca 75

<210> 17  
 <211> 160  
 <212> RNA  
 <213> artificial sequence

<220>  
 <223> H2 Leu catalytic RNA

<400> 17  
 ggaucgucag ugcauugaga ugcccaaagc ccuucucacu 40  
 uccggugggg caugcguuau ugcguuaggu gaggaaugcu 80  
 aguaugcggg ugguauccea gggguaaggg accggauucu 120  
 aaauccggcau uccgagguuc gaauccucgu accgcagcca 160

<210> 18  
 <211> 156  
 <212> RNA  
 <213> artificial sequence

<220>

<223> D1-Leu catalytic RNA

<400> 18

ggaucgucag	ugcauugaga	uagugucacu	aggcgggggg	40
ugauagcgca	uuuugagguu	ugguuugggg	gguaaugcgu	80
gaguucuugg	gugguaucga	agggguaagg	gaucuaaauc	120
cgacauuccg	agguucgaau	ccucguaccg	cagcca	156

<210> 19

<211> 35

<212> RNA

<213> artificial sequence

<220>

<223> RNA forming a minihelix

<400> 19

ggugguacga	gguucgauc	cucguaccgc	agcca	35
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<210> 20

<211> 73

<212> RNA

<213> artificial sequence

<220>

<223> V1 variant of otRNA

<400> 20

ggugguaucc	ccaagggua	gggaccggau	ucuaaaucg	40
gcuaucgaga	uucgaauccu	cguaccgcag	cca	73

<210> 21

<211> 75

<212> RNA

<213> artificial sequence

<220>

<223> V2 variant of otRNA

<400> 21

ggugguaucc	ccaaggggua	cgggaccgga	uucuaaauc	40
ggcauuccga	gauucgauc	cucguaccgc	agcca	75

<210> 22

<211> 73

<212> RNA

<213> artificial sequence

<220>

<223> V3 variant of otRNA

<400> 22

ggugguauc ccaaggguaa gggaccggau ucuaaaucg  
gcauucgagg uucgaauc cuuaccgcag cca

40  
73